

Ohio Sea Grant College Program

Call for Research Pre-proposals: 1 February 2022 – 31 January 2024

The Ohio Sea Grant College Program is requesting pre-proposals for one- or two-year research projects on Great Lakes issues with particular significance to Lake Erie and its watershed. Specific research funding priorities are outlined below. Our preference is to support a diversity of projects; therefore, proposals should not exceed **\$80,000 per year**, including indirect costs. Approximately \$400,000 is available in each project year (1 February 2022 to 31 January 2023 and 1 February 2023 to 31 January 2024).

PRE-PROPOSAL DEADLINE: Ohio Sea Grant must receive a PDF version on its web page ohioseagrant.osu.edu/research/submit by **5:00pm Thursday 25 March, 2021**.

PROPOSAL DEADLINE: Ohio Sea Grant must receive a PDF version on its web page ohioseagrant.osu.edu/research/submit by **5:00pm Thursday 3 June, 2021**.

Ohio Sea Grant's Strategic Plan and Funding Priorities

Ohio Sea Grant is one of 34 state Sea Grant programs that are part of the National Sea Grant College Program (NOAA, U.S. Department of Commerce). Ohio Sea Grant has four main research foci: 1) Healthy Coastal Ecosystems, 2) Sustainable Fisheries and Aquaculture, 3) Resilient Communities and Economies, and 4) Environmental Literacy and Workforce Development. Ohio Sea Grant also works with the Ohio Lake Erie Commission (LEC), Ohio Department of Natural Resources (ODNR) and Ohio Environmental Protection Agency (OEPA) to align our research portfolio with the needs of the state. Any proposal that addresses: 1) Ohio Sea Grant's main priorities (listed below - OHSG), 2) Ohio's state agency priorities (listed below – LEC, OEPA, ODNR), or 3) Ohio Sea Grant's strategic plan (ohioseagrant.osu.edu/research) will be considered.

Any harmful algal bloom related research projects that are not specifically addressed in the priorities below are encouraged to apply for Ohio Department of Higher Education - Harmful Algal Bloom Research Initiative funding (pre-proposals due February 18th, 2021).

Research Priorities:

Aquaculture

- Renewable energy systems for land-based aquaculture production (OHSG)
- Water quality, conservation, and treatment in land-based aquaculture production (OHSG)
- Technology to enhance the utilization and economic value of aquatic products: extend shelf-life, enhance quality, minimize by-product loss, and optimize harvest and production (OHSG)
- Research and develop new technologies and resources to address changing food safety and compliance needs. Create tools and techniques for controlling food safety and facilitating compliance (OHSG)
- Fish health on the farm: research and technology that helps producers identify and respond to health concerns and develop aquaculture specific pest management strategies and tools (OHSG)
- Preparedness of veterinary health professionals to meet needs of aquaculture industry (OHSG)
- Aquaculture seafood market research: public perception for new species and processed products and associated investment requirements (e.g., infrastructure, permits, equipment) (OHSG)

- Research that identifies barriers to workforce entry and expansion and evaluates approaches and resources for addressing them (OHSG)

Marine Debris and Emerging Contaminants

- Effects/impacts of plastics on aquatic species and humans (OHSG)
- Biosolids residual management regarding emerging contaminants (PFAS, etc.) (OEPA)

Economics and Coastal Community Development

- Economic feasibility of shrink wrap recycling program (OHSG)
- Proposals that support development of just and equitable decision support tools for community-based restoration (OHSG)
- Social science proposals that document the social, economic, and environmental benefits of restoration projects that address nutrient runoff, habitat enhancement, public access, and disposal of dredged material (OHSG)
- Further work on beneficial reuse of dredge material. This can build on previous work for agricultural applications or development of new uses. For example, research on small scale disposal options for beneficial use of dredged material (i.e. for marinas that are allowed to open lake dispose but would like to find a way to participate in beneficial use) (LEC, OHSG)

Climate Change Resiliency

- Municipal sanitary/stormwater collection system climate change resiliency. Are current systems able to adapt to climate change scenarios? How will the current infrastructure building design specifications hold up against the impacts of climate change? How do we design systems to deal with a changing climate? (OEPA)
- Cost-benefit analysis of green and gray infrastructure (LEC)
- Impact of climate change on recruitment and population dynamics of economically important sport fishes, with a focus on cool and cold-water fishes in Lake Erie (ODNR)

Healthy Coastal Ecosystems

- Understanding of percid spawning and recruitment, especially relative to the dynamics that seem to produce such different hatches in each basin (ODNR)
- Evaluating near-shore, “nature-based” shoreline practices for erosion reduction (ODNR)
- Factors influencing the nutrient filtering efficiency of coastal wetlands. For projects related to the H2Ohio Wetland Program please reach out to Ohio Sea Grant to align with current initiative (ODNR)
- Create a coastal sustainable development program that will evaluate and monitor sustainable design concepts for combined residential/agricultural lands (ODNR)
 - Old Woman Creek National Estuarine Research Reserve and Office of Coastal Management can connect research team with identified a private landowner. Please contact Janice Kerns (Janice.Kerns@dnr.ohio.gov) for more information.

Hypoxia

- Influence of hypoxia on distribution and behavior of Lake Erie fish assemblages (ODNR)
- Develop efficient and effective monitoring and reporting program for hypoxic zone in Lake Erie (Western and Central basins) to measure progress towards reducing size and duration. Note: NOT modeling – this should be empirical work to accurately described and displayed (LEC)

FUNDING SCHEDULE AND SUMMARY

- **Thursday, 25 March 2021 by 5:00p.m. EST**– Applicants should submit a PDF version of their pre-proposal by accessing ohioseagrant.osu.edu/research/submit, selecting “2022-2024 Large Grant pre-proposal”, and uploading one PDF file.
- **Friday, 9 April 2021** – Applicants will be notified of the status of their pre-proposal (encouraged or discouraged from submitting a full proposal).
- **Wednesday, 14 April 2021 at 1:00p.m. EST**– Ohio Sea Grant will host a webinar for investigators to discuss the full proposal process, ask questions and explore possible opportunities for collaboration.
- **Thursday, 3 June 2021 by 5:00p.m. EST**– Applicants should submit a PDF version of their full proposal by accessing ohioseagrant.osu.edu/research/submit, selecting “2022-2024 Large Grant full proposal”, and uploading one PDF file.
- **Thursday, 2 September 2021** – Applicants receive copies of external peer reviews.
- **Thursday, 9 September 2021** – Deadline for Ohio Sea Grant to receive comments (one copy) from investigators wishing to respond to peer reviews.
- **Friday, 1 October 2021** – Applicants will be notified as to whether their proposal will be included in the omnibus proposal submitted by Ohio Sea Grant to the National Sea Grant Program.

PRE-PROPOSALS: The pre-proposal process allows investigators to outline projects and receive feedback without spending the time required to prepare a full proposal. Pre-proposal submissions will either be encouraged or discouraged to submit a full proposal; however, any pre-proposal that is submitted is eligible to submit a full proposal. Also, successfully completing the pre-proposal process (i.e., being encouraged to submit a full proposal) does not guarantee funding.

A PDF version of the pre-proposal (with all pieces of the pre-proposal in one PDF document) must be submitted to Ohio Sea Grant by **5:00 p.m. EST on Thursday, 25 March 2021**. Applicants should submit by accessing ohioseagrant.osu.edu/research/submit, selecting “2022-2024 Large Grant pre-proposal” and uploading files. **Pre-proposals should include, in one single PDF document, the following:**

- A cover page that includes the project title, and the name, affiliation, address, telephone numbers, and email address of each investigator;
- A maximum of three pages of summary narrative (literature cited is not included in page maximum), which includes objectives, methodology, and rationale for the proposed project (11pt., Times New Roman font preferred); the required project summary form is available on our website at (ohioseagrant.osu.edu/research/funding);
- A Sea Grant budget form for each year of the project (max 2 years) and a summary budget combining both years; the required budget form is available on our website at (ohioseagrant.osu.edu/research/funding);
- A budget justification describing all expenses for each year of the project;
- A one-page vita for each investigator;
- Letters of collaboration from partners are not required at the pre-proposal stage. At the full proposal stage, a Letter of Collaboration form will be strongly encouraged from all project partners.

Progress/completion reports for Sea Grant projects are submitted annually. **Reporting on all previous grants must be current before an investigator's pre-proposal will be accepted.** Submission of electronic pre-publication manuscripts to our office of resultant publications is a part of investigators' reporting requirements.

The initiation date for new projects in this two-year submission can be 1 February 2022 or 1 February 2023 (one-year projects only). While projects can be approved for more than one year, funding is approved annually and is dependent upon federal appropriations. Contact the Ohio Sea Grant office if you have any questions regarding this process (contact information can be found at the end of the RFP).

FULL PROPOSALS: Detailed guidelines for preparing full proposals will be sent as an attachment to all status notification of pre-proposals emails. Full proposals will be due by 5:00 p.m. EST on Thursday, 3 June 2021 and will require the following sections:

- Project summary form: opportunity to make edits suggested in review of your pre-proposal;
- Proposal (15 pages max): rationale, objectives, methodology, timeline/project schedule outreach/education plan, and how this proposed work will build on the current state of science (and your specific current work, if appropriate);
- Literature cited (not included in 15 page maximum);
- Budget form and budget justification;
- A one-page vita for each investigator/project member;
- Data management plan – NOAA Data Sharing Directive;
- Completed ePA-005 for OSU PI's **OR** The Ohio State University Office of Research Subrecipient Letter of Intent and Indirect Cost Rate Agreement for non-OSU PI's;
- Letters of Collaboration are highly encouraged from all project partners.

PRE-PROPOSAL REVIEW PROCESS: A panel of science and agency experts will review all pre-proposals. Full proposals will be encouraged from those investigators receiving high reviews. However, those pre-proposals that are discouraged are not prohibited from submitting full proposals. The number of pre-proposals selected is based on the quality of the pre-proposals and an estimate of funding that will be available. We expect to fund five full proposals and will encourage submission of full proposals by at least twice that number. The first investigator listed on each pre-proposal will be contacted with the results of the review on Friday, 9 April 2021.

Ohio Sea Grant uses the five criteria listed below for evaluating pre-proposals. Each criterion listed below will be awarded up to 10 points (50 point total) and then divided by five to get a total score on a scale of 0-10 with 10 being the highest possible rating. Pre-proposals will also be rated on a qualitative +, 0, - scale, with the (+) score meaning this is something we should encourage for a full proposal, (0) is neutral, and (-) stating this pre-proposal should not be encouraged to submit a full proposal.

RATIONALE: the degree to which the activity addresses an important Great Lakes issue, specifically Lake Erie and its watershed.

SCIENTIFIC MERIT: the degree to which the activity will advance the state of the science or discipline through use and extension of state-of-the-art methods.

INNOVATIVENESS: the degree to which new approaches to solving problems and exploiting opportunities in resource management or development, or in public outreach on such issues will be employed; alternatively, the degree to which the activity will focus on new types of important or potentially important resources and issues.

QUALIFICATIONS AND PAST RECORD OF INVESTIGATORS: the degree to which investigators are qualified by education, training, and/or experience to execute the proposed activity and their record of achievement with previous funding.

RESPONSIVENESS TO SEA GRANT PRIORITIES: the degree to which the proposal addresses the priorities of the National Sea Grant Program (seagrant.noaa.gov) and Ohio Sea Grant's 2018-2024 strategic plan (ohioseagrant.osu.edu/research/funding), and important state, regional, or national constituencies.

NATIONAL SEA GRANT REVIEW: The staff of the National Sea Grant College Program will review all full proposals, external reviews, and investigator's comments obtained by Ohio Sea Grant and will ascertain that the 34 state Sea Grant programs are not duplicating research. The National Sea Grant College Program Funding decisions should be made by early 2022.

Instructions for the Project Summary Form

The project summary form is intended to provide a brief but concise description of the project in a form useful to a variety of readers. Prepare only one summary form for the proposal, no matter how many years are proposed. **This form should not exceed three pages (excluding literature cited).**

OBJECTIVES should state what the investigator(s) intends to do. Measurable objectives are preferred. Quantifiable and hypothesis-based objectives are well received.

METHODOLOGY should outline the steps and approaches to be taken. Specific questions that an interested person would ask should be answered under methodology—which heavy metals, which pollutants, which pathogens, what species of fish, what kind of model, location, etc? The methodology should be specific enough to allow peer reviewers to accurately evaluate your proposal.

RATIONALE should be a concise statement of why this is an appropriate Sea Grant project. That is, what problem or opportunity is being addressed and why is it important. The project need not promise to fully solve a problem but it should be shown as a logical step toward a solution. Include the potential end users (management agencies, private sector, etc.) of the project information to be developed if they have been identified. Collaboration with state, regional, and federal agencies is encouraged. **An outreach component is required of all Sea Grant-funded research.** We take this component into consideration when reviewing proposals, so please develop a strong outreach component to your proposal. Outreach that engages stakeholders, K-12 students, state agencies, and the general public is preferred. Feel free to reach out to Ohio Sea Grant staff to help you develop an outreach plan (contact information listed at end of this document).

Instructions for the Budget Form

Prepare a budget form for each year of funding proposed and a cumulative form for all years combined. The budget must have the approval of appropriate university administrators (i.e., Sponsored Program Officer) at the full proposal stage, but NOT for the pre-proposal. The investigator is expected to adhere to the budget category amounts as they appear in the approved budget. Any proposed changes to the budget categories that collectively exceed 10% of the total budget will require prior written authorization. Funds spent in excess of the approved total budgeted amount will be the responsibility of the Principal Investigator and associated awarded unit. Again, Sponsored Program Officer approval is not needed at the pre-proposal stage; however, please provide the name and contact information for the Sponsored Program Officer you work with at your university.

SENIOR PERSONNEL: The first Principal Investigator listed is responsible for the research outlined in the proposal and will receive correspondence regarding the project. Sea Grant's mission is to increase understanding and wise use of the nation's ocean, coastal, and Great Lakes resources. Sea Grant fulfills this mission by promoting educational excellence, responsive research and training, and broad, prompt dissemination of knowledge and technical information. Ohio Sea Grant takes the educational component of this mission very seriously and prefers projects requesting student support rather than investigator salary, when possible. We do allow up to \$5,000, including benefits, to go to investigator salary annually.

OTHER PERSONNEL: Professionals are non-faculty and non-staff associated with the project. Research associates are professional persons participating in the project who are part-time employees or persons retained solely for the project or staff members of participating organizations. Research associate/graduate students are part- or full-time students who hold at least a bachelor's degree or equivalent, are enrolled in a program leading to an advanced or professional degree, and are integral to the project. Professional school students are students enrolled in medical, legal, and other professional schools. Pre-bachelor students may be employed as aides on a Sea Grant project either on salary as part-time employees or on an hourly basis. Pre-bachelor students are undergraduate students enrolled either part or full-time in a course leading to a degree, including an associate degree in the case of students in two-year programs or a certificate in the case of some vocational students. Secretarial/Clerical is a category for office personnel (research projects can no longer request federal funds for positions in this personnel category.) Technicians is a category for lab technicians, shop personnel, and other persons with special but nonprofessional skills. Other persons are all others not included in the previous categories.

FRINGE BENEFITS: Benefits customarily paid by the grantee institution following its usual practices in the payment of such benefits. This amount is provided in total, not for each person included in the proposal. Include the fringe benefit rates for each person in the proposal.

PERMANENT EQUIPMENT (Capitalized Assets): Should be included here as a total figure. Capitalized assets are defined as equipment with a useful life of one or more years with an original cost or value of \$5,000 or more.

EXPENDABLE SUPPLIES AND EQUIPMENT: Should be clearly justified in the body of the budget justification. Only the total is shown on the budget form.

TRAVEL: State the justification for travel and the basis for the cost of the travel in the body of the proposal. Identify destination and include all costs involved. Per Diem for travel must be based on the regulations of the proposing institution and included in the travel budget. Domestic travel includes North America and travel to all U.S. Possessions or Trusts, including Puerto Rico, the Virgin Islands, the Trust Territories, Guam, and Samoa. All travel anywhere outside the U.S., its possessions, and Canada is considered international and will require prior approval.

PUBLICATION AND DOCUMENTATION COSTS: This space should include any publication costs for outreach materials developed or manuscript page charges. Ohio Sea Grant should be informed of anticipated publications in advance to assure that appropriate acknowledgements are provided. Ohio Sea Grant also requires receipt of all pre-publication manuscripts resulting from the funded work.

OTHER COSTS: List such items as consultants, reimbursement of participating organizations outside the proposing institution (subcontracts), equipment rental and maintenance, and communication costs, etc.

INDIRECT COSTS: The basis for computing indirect costs as determined by the investigator's institution should be stated in the body of the proposal and, in brief, on the budget form. A copy of the University's Indirect Cost Rate Agreement will be required at the full proposal stage. By special agreement with The

Ohio State University, investigators not at OSU are not charged OSU's indirect cost rate charge, but charge indirect costs at the rate determined by their own institution. Indirect costs apply to the grantee share as well as to Sea Grant funds. Indirect costs should be calculated per your university's guidelines.

MATCHING FUNDS: Sea Grant requires at least \$1 of non-federal matching support for every \$2 of federal support requested.

Matching non-federal support may include:

- salaries, wages, and benefits of those working on the project;
- expendable supplies and equipment;
- donated supplies, space, or equipment; and
- unclaimed indirect costs.



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